RECKMANN

operation manual

CZ
hydraulic furling system

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1 Introduction

1.1.1 Packing list CZ

Date _____

Customer _____

Dealer _____

Order number _____

Type: CZ _____

1	CZ-	_____	t
___	With motor	_____	
___	Deckring		
___	Isolatorring		
___	Custom deck spacer	(optional)	
___	Quick-Release Pin		
___	DIN966	_____	
	Chock plates:	_____	5mm
		_____	10mm
		_____	20mm
		_____	Bottom chock plate
1	Topswivel T-	_____	t
1	Manual		

Additional equipment: _____

_____

Packed by _____

_____

Dear Reckmann customer,

With the CZ reefing system you have purchased the latest reefing system which you can rely on. This unit is manufactured using the latest technical innovations and uses the best materials. It is a successful combination of design, performance and safety. We are confident that the CZ reefing system will provide you with enjoyment for many years.

1.1.2 How to use this manual

Read this manual carefully before assembly and operation of your Reckmann gear.
Points that need additional attention will be marked in the following way:

Note!
This sign marks points which need special attention.

Warning!
This sign marks the risk of injuries or other significant danger.

Tip
this triangle marks useful tips.

1.1.3 Important remarks

After your furling system was installed accordingly to this manual, we recommend to read the following notes carefully before you set your furling system into operation.

Note!

Improper use according to this manual of the furler may cause loss of warranty.
Consult a Reckmann service partner in any case of problems.

Warning!

Any modification or damage may influence the safe operation of the furler.

Please make sure that the furling system is in a well condition according to this manual.

Warning!

Adjusting with load on the sheet may damage the profile.
Adjust only when sheet is unloaded.

1.2 Maintenance of the furler

To keep the furler in a good optical and technical condition, a regular service is required. Maintenance of the furler consists of two basic points:

- Regular maintenance by the customer
- Regular Service performed by one of our service partners

Tip

Proper operation can only be ensured by regular service. Make sure that the maintenance plan of your furler is carried out carefully.

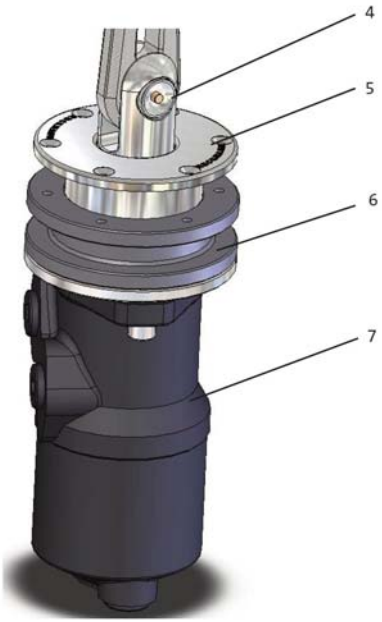
1.2.1 Maintenance to be carried out by the customer

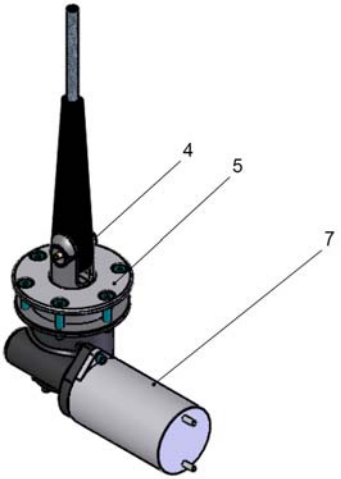
Clean your furling gear regularly. Wash carefully all salt from the furler.
Stainless steel parts can be treated with special care product.
Additional for all electric and hydraulic furling units, the function of the manual backup drive and the condition of all hydraulic hoses / electric wires should be checked regular.

1.2.2 Maintenance to be carried out by a Reckmann service partner

To ensure the safe and proper operation of the furler, it has to be serviced every five years by an authorized Reckmann service partner. A table of all authorized Reckmann service partners can be found at the end of this manual or at www.reckmann.com

2 Product description





4	Quick release Pin	5	Deck plate
6	Custom deck spacer	7	Motor (optional with brake)

3 Assembling the furling unit

The Reckmann furling unit is installed directly to the deck. The deck has to tolerate the entire stay load.

Warning!

Make sure that the deck is strong enough to carry the entire stay load.

Note!

When the furler is not aligned with the stay, furler and stay could be damaged.
Ensure that the stay is aligned with the furler.

Note!

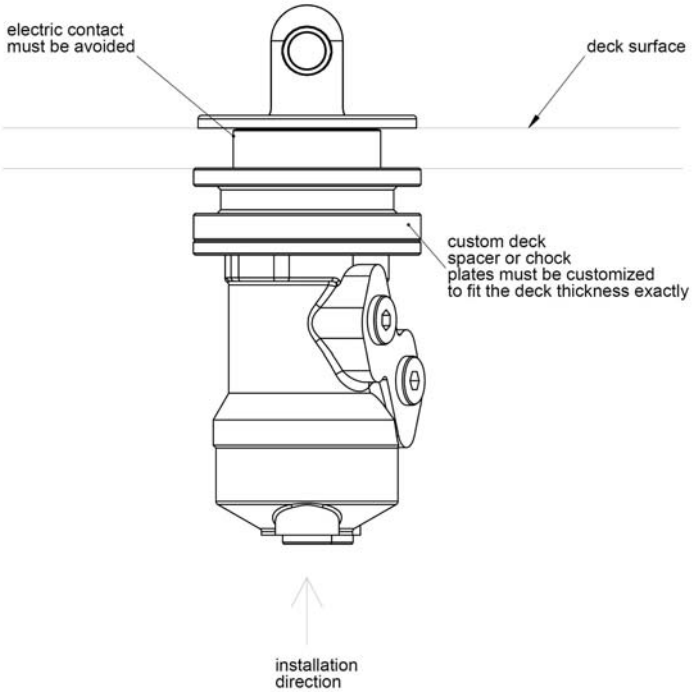
Please note that the furler is installed to the deck from underneath.
Make sure that you have enough space below deck to install the furler.

Note !

Corrosion may occur between the furler and the deck. Tighten the furler and the deck with Sikaflex or a similar sealing product.
Between CFK decks and the furler has to be an insulation layer made of GRP

3.1 Installation of the furler to the deck

The Reckmann code zero furler has to be slid through a deck cut out from underneath. It is secured with a number of bolts which clamp the furler to the deck. To make the furler suit to your deck thickness, a number chock plates or a custom deck spacer ring has to installed on the motorflange of the furler. Please note that the furler which is shown in the illustration can be different from your furler. Please ensure that the entire furling unit has to be insulated against the deck. Otherwise excessive corrosion may occur.
Ensure that the furler is pre-aligned with the stay direction, otherwise the furler or the cable will be damaged by bending loads.



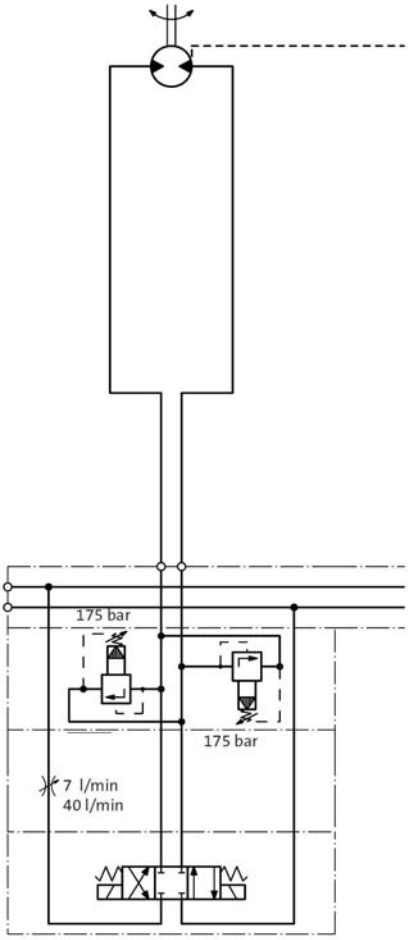
The following steps are necessary for the installation of the furler:
Mark the position where the furler has to be installed exactly. Put the deck plate (3) in position and drill all holes for the clamping screws.
Now drill the center hole concentric to holes for the clamp holes.
Put now the chock plates (1) and the iso-ring (2) on the furler flange and slide the furler from underneath into the deck cut out. Secure the furler with the counter sunk clamp screws.

Note!

Electric contact between furler and deck can cause corrosion problems.
Ensure that furler and deck have no direct contact after installation.

3.2 Hydraulic connection of systems without brake

The CZ8t Furler should be connected to the system according to the following diagram:



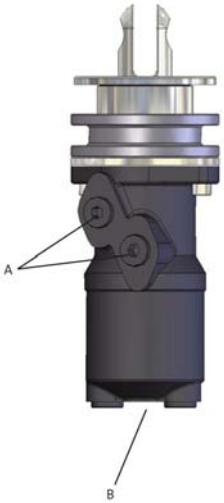
The hydraulic valves are no Reckmann supply.

To control the furling operation, the motor is hydraulic fixed. To avoid overloading of the motor, a pressure relief valve with a max. pressure of 175 bar has to be installed between the A and B lines. To control the furling speed, a flow control valve with a max. flow rate of 40l/min for OMR315 and 7l/min for OMR50. Please note that the sail may unfurl due to leakage oil.

Note!

The sail may unfurl due to leakage oil in the motor. Secure the sail against unfurling.

Both main lines A and B are connected to the threads at the side of the motor. The drainline has to be connected to the thread at the bottom of the furler. Thread for the mainlines is G1/2', for the drainline G1/4'.



3.3 Hydraulic connection of motors with brake

The hydraulic motor of the Reckmann furler is equipped with an integrated multiple disc brake. To release the

brake a hydraulic pressure of 30 - 280 bar has to be at the ventilation port of the brake.

Note: Higher pressure can cause damages of the brake

For a safe handling of the unit you should meet the following instructions:

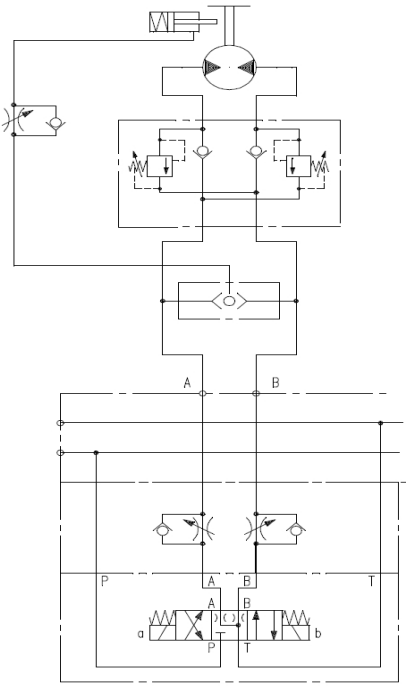
The motor has to be controlled by a 4/3 way direction valve. Both directions are possible. To limit the revolution speed a

flow control valve has to installed in the return line of the direction valve.

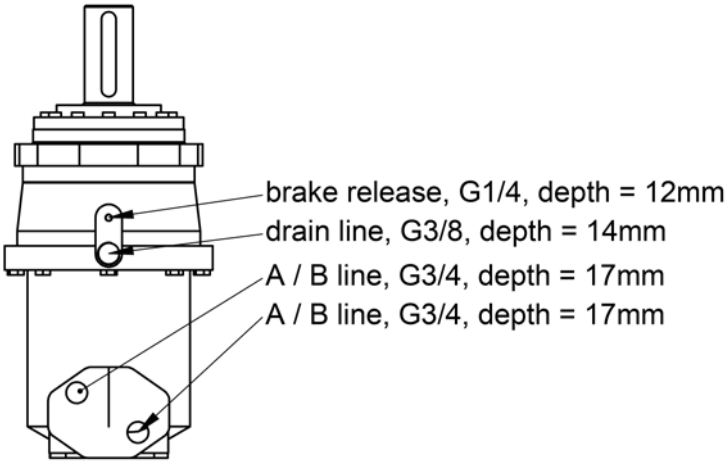
To avoid overloading of the motor in braking operation, two pressure relief valves have to be installed between the direction valve and the motor.

The leakage line of the motor has to be connected to the system. The direction valve of the brake should be operated parallel to the direction valve of the motor.

Please see the table in the annex for hydraulic details of the used elements.



Hydraulic ports of the motor:



4 Operation of the furler

4.1 Reckmann Quick-Release Pin

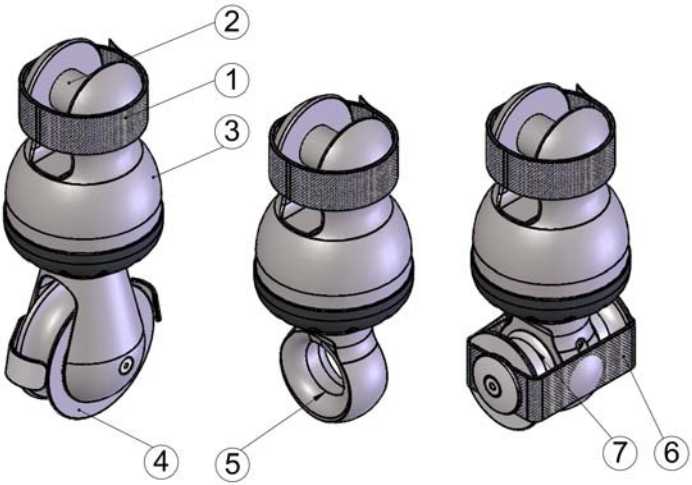
To release the self - locking pin press the button (1) and pull the pin out. Check the pin before every use: Push the button and check if the locking ball moves easily. Take care that the button moves out firmly when you stop pushing it in. Flush the pin with fresh water after every use. Salt desposits from sea water can make the pin useless. Replace the pin regulary.

Note!

The function of the pin can be influenced by enviromental impacts. Clean the pin regulary. Ensure the proper function of the pin before use.
Replace the pin regulary.

4.2 Topswivel

The Reckmann Titanium Topswivel range is available in three different types: To suit a 2:1 halyard setup, to be lashed with a rounded eye and to be lashed with a bone style connector.



2:1 halyard purchase eye connector bone connector

1	Velcro for stay pin securing	2	Stay pin
3	Swivel body	4	2:1 halyard sheave
5	Halyard connection eye	6	Velcro for lashing securing
7	Bone connector		

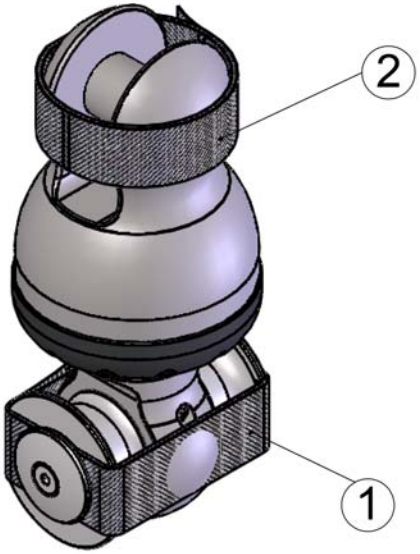
Tip

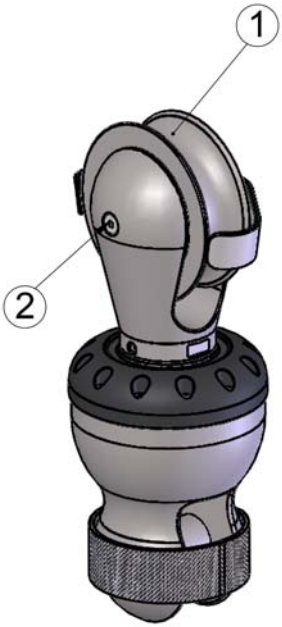
Ensure that the halyard can transmit the torque which occurs due to friction in the swivel bearing while rotating under load.

Warning!

Please replace the webbing and the velcro strops regular.

Please make sure that stay, halyard and 2:1 sheave are secured properly: (please see (1) and (2) in the following illustrations)





The bone-style connector should be used with a lashing in the following style:

Make sure that all parts of the lashing are lying properly on the sheaves and that the load distributed evenly on all parts of the lashing.

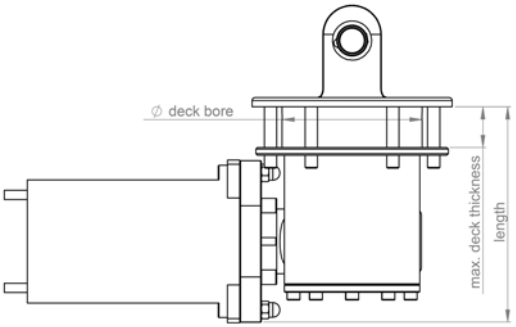
Note!

Seizing of threads. To avoid seizing of threads, all threaded parts need to be coated with anti seizing gel before they are joined.

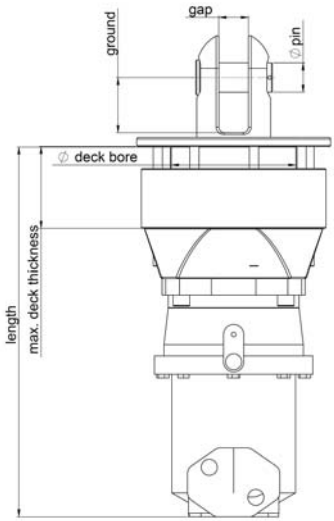
5 Specifications

5.1 Specification CZ furler

CZ-8e

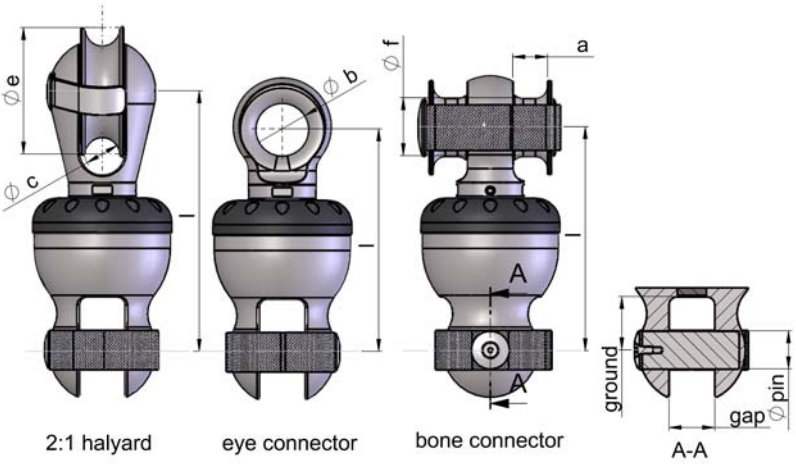


CZ-8 up to CZ-64



		CZ-8e	CZ-8	CZ-16	CZ-20	CZ-32	CZ-64
SWL	[kg]	8000	8000	16000	20000	32000	64000
motor	[-]	800W, 24V	OMR 50/315	OMT160 FH/FL	OMT400FL/FH	OMT400FL/FH	OMT400FL/FH
weight	[kg]	10,2	12,2	40,66	50,76	53,51	68,33
max. furling moment	[Nm]	50	100/560	450	1100	1100	1100
at pmax	[bar]	-	140/135	200	180	180	180
at I	[A]	50	-	-	-	-	-
furling speed	[rpm]	100	100	100	100	100	100
at oil flow	[l/min]	-	5/35	20	40	40	40
max. rated Voltage	[V]	24	-	-	-	-	-
max. static braking moment	[Nm]	-	-	1200	1200	1200	1200
Pin	[mm]	20	20	28	32	38	45
Gap	[mm]	19	19	28	32	38	45
Ground	[mm]	36	36	53	60	68	60
Length	[mm]	120	229	355	402	416	434
max. deck thickness	[mm]	26	62	87,5	89	97	115
req. deck bore	[mm]	91	81	113	135	150	175

5.2 Specification topswivel



	TS-12			TS-20			TS-40		TS-64	TS-80
	2:1	eye	bone	2:1	eye	bone	eye	bone	bone	bone
swl t	12			20			40		64	80
pin mm	19			25			38		45	55
gab mm	25			30			38		45	55
ground mm	29			35			49		58	73
weight kg	1,5	1,2	1,5	3,2	2,5	3,1	5,5	6,8	15,0	26,0
l mm	98	111	111	129	146	146	190	190	237	280
a mm	-	-	17,5	-	-	22,5	-	27	38	42
b mm	-	26	-	-	35	-	45	-	-	-
c mm	16	-	-	23	-	-	-	-	-	-
e mm	65	-	-	83	-	-	-	-	-	-
f mm	-	-	28	-	-	38	-	49	66	80

6 Dealer network and service stations

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